

ABSTRACT

In the present invention, attitudes of a camera 30 are read by a gyro sensor unit 34, and a PC 10 performs necessary image processing and calculates the positions of the camera 30. Contours of a body are acquired at optional points of view for photographing by freely changing the positions and attitudes of the camera. The positions of the camera are calculated by acquiring a plurality of images and attitudes by capturing the body from a plurality of positions and attitudes and by using the contours of the body on the images. A three-dimensional shape is formed again from the positions of the camera and the contours of the body.